

## REMARKS

Applicant has studied the Office Action dated February 8, 2007. Claims 1-27 are pending. Claims 1 and 7 have been amended. Claims 1, 11 and 21 are independent claims. No new matter has been added as the amendments have support in the specification as originally filed.

It is submitted that the application, as amended is in condition for allowance. Reconsideration and reexamination are respectfully requested.

### Amendments to the Claims

Claims 1 and 7 have been amended to more clearly disclose the invention. It is respectfully submitted that the amendments have support in the application as originally filed and are not related to patentability.

### § 102 Rejections

Claims 1, 6-11, 16-24 and 26 were rejected under 35 U.S.C. § 102(a) as being anticipated by Applicant's admitted prior art (AAPA). Applicant respectfully disagrees with the Examiner's interpretation of the AAPA and respectfully traverses the rejection.

It is respectfully noted that a proper rejection for anticipation under § 102 requires complete identity of invention. The claimed invention, including each element thereof as recited in the claims, must be disclosed or embodied, either expressly or inherently, in a single reference. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991); Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991).

### Independent Claims 1, 11 and 21

It is respectfully noted that the Examiner asserts, at paragraph 3 of the Office action, that the AAPA discloses recognizing a construction of uplink time slots at paragraphs 9 and 10. It is further respectfully noted that the disclosure at paragraphs 9 and 10 is related only to detecting "a boundary of the downlink time slot" with no disclosure of any detection or recognition of any construction related to any uplink time

slot. Therefore, it is respectfully submitted that the AAPA fails to disclose recognizing a construction of uplink time slots as asserted by the Examiner.

Furthermore, it is respectfully noted that the Examiner asserts, at paragraph 3 of the Office action, that the AAPA discloses determining a new switching point based on the detected switching point and the recognized construction of uplink time slots and downlink time slots at paragraph 19. It is respectfully noted that paragraph 19 is part of the Summary and, therefore, is not part of the AAPA. Applicant assumes that the Examiner intended to cite paragraph 10 based on the specific notation of "determines a switching time of the TDD switch 40, taking into consideration a signal processing delay time defined by the communication system" and the assertion will be evaluated in view of paragraph 10.

It is respectfully noted that the specific disclosure in paragraph 10 cited by the Examiner is that a "switching time of the TDD switch" is determined in consideration of "a signal processing delay time defined by the communication system." It is respectfully submitted that the "switching time of the TDD switch" is not analogous to the new switching point recited in claims 1, 11 and 21 since the "switching time of the TDD switch" is a delay time related to an electrical component and, therefore, could not be based on the recognized construction of uplink time slots and downlink time slots, as recited in claims 1, 11 and 21. It is further respectfully submitted that the "signal processing delay time defined by the communication system" is not analogous to the recognized construction of uplink time slots and downlink time slots recited in claims 1, 11 and 21 in view of the disclosure in paragraph 11 that the "signal processing delay time defined by the communication system" is the "time required for elements constituting the transmitter 60 and receiver 70 to process signals" and, therefore, is not related to the recognized construction of uplink time slots and downlink time slots as well as in view of the lack of any disclosure in the AAPA of any recognized construction of uplink time slots, as was previously submitted.

It is respectfully submitted that the AAPA fails to disclose each element recited in independent claims 1, 11 and 21 and, therefore, the Examiner has failed to show the required complete identity of invention. It is further respectfully submitted that the

amendments to claim 1 in order to more clearly disclose the invention further differentiate claim 1 from the AAPA.

#### Claims 7 and 17

It is respectfully noted that the Examiner asserts, at paragraph 4 of the Office action, that the AAPA discloses determining the switching point based on an actual signal processing time of the transmitting unit at paragraphs 10 and 11. It is further respectfully noted that paragraph 10 discloses that the "switching time of the TDD switch" is determined in consideration of "a signal processing delay time" and paragraph 11 specifically discloses that the "signal processing delay time" is a "fixed value" that "may be much different from the actual delay times of elements provided in any particular terminal." Therefore, it is respectfully submitted that the "switching time of the TDD switch" is not determined based on an actual signal processing time, as recited on claims 7 and 17, but rather according to a "fixed value" that "may be much different from the actual delay times" and, since the AAPA fails to disclose each element recited in independent claims 7 and 17, the Examiner has failed to show the required complete identity of invention.

#### Claim 23

It is respectfully noted that the Examiner asserts, at paragraph 14 of the Office action, that the AAPA discloses adjusting a delay time of the signal at paragraph 12, specifically citing control of the "TDD switch 40" by the "modem 10" according to "the determined switching point." It is further respectfully noted that paragraph 12 discloses that the "operation of the TDD switch 40 is maintained according to the determined switching point." Therefore, it is respectfully submitted that paragraph 12 fails to disclose adjusting a delay time of the signal, but rather discloses maintaining the delay time of the signal and, since the AAPA fails to disclose each element recited in claim 23, the Examiner has failed to show the required complete identity of invention.

It is respectfully asserted that independent claims 1, 11 and 21, as well as dependent claims 7, 17 and 23, are allowable over the cited reference for the reasons previously given. It is further respectfully asserted that claims 6-10, 16-24 and 26 are

allowable over the cited references by virtue of their dependence from an allowable independent claim.

### § 103 Rejections

Claims 2-5, 12-15 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA view of Wildey (U.S. Pat. No. 6,463,080). This rejection is respectfully traversed.

It is respectfully noted that the Federal Circuit has provided that an Examiner must establish a case of prima facie obviousness. Otherwise the rejection is incorrect and must be overturned. As the court recently stated in In re Rijkaert, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993):

"In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. 'A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.' If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned." (citations omitted.)

It is well-settled that a reference must provide some motivation or reason for one skilled in the art (working without the benefit of the applicants' specification) to make the necessary changes in the disclosed device. The mere fact that a reference may be modified in the direction of the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

It is well-settled law that to support a finding of obviousness, a reference must provide some motivation, working without the benefit of the applicant's specification, to make the necessary changes in the device disclosed in the reference. The mere fact that a worker in the art could modify the reference to meet the terms of the claims is not, by itself, sufficient. The mere fact that a reference may be modified in the direction of

the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

It is respectfully submitted that the Wildey invention is directed to the problems in the prior art related to "variations of the received signal power due to signal shadowing and multi-path fading" that occurs "because the satellite signal is received not only via the direct path but also after being reflected from objects in the surroundings," the effects of which "occur in both uplink and downlink directions" and, specifically, directed to the "variability of retransmission or redundancy of a single path." Wildey at col. 1, ll 16-55. It is further respectfully noted that the Wildey invention proposes "using time diversity in the transmitted signal" to "provide a technique where the time diversity may be varied according to the actual radio propagation conditions." Wildey at col. 2, ll. 39-61.

Therefore, it is respectfully submitted that Wildey is directed to transmissions in a single direction, such as uplink communications from a mobile terminal, and is specifically directed to the reception of transmissions in a single direction that are subject or "multi-path fading." Furthermore, it is respectfully submitted that Wildey is directed to synchronizing the receipt of signals transmitted in a single direction that are received as multiple signals due to reflections from objects in the transmission path. Moreover, it is respectfully submitted that there is no teaching in Wildey that is directed to synchronizing signals transmitted in one direction, such as uplink communications from a mobile terminal, with signals transmitted in another direction, such as downlink communications to the same mobile terminal.

On the other hand, it is respectfully noted that the AAPA is directed to "synchronizing the transmission of uplink signals and reception of downlink signals by a terminal." AAPA at paragraph 0002. It is respectfully submitted that, unlike Wildey, the AAPA is directed to synchronizing uplink communication signals transmitted from a terminal with downlink communication signals received by the same terminal or, in other

words, to synchronizing signals transmitted in one direction with signals received in another direction.

It is respectfully submitted that one of ordinary skill in the art would **not** be motivated, without the benefit of impermissible hindsight, by the teachings of Wildey, which is directed to synchronizing the receipt of multi-path signals in a single direction, to modify the AAPA, which is directed to synchronizing the transmission of signals in one direction with the receipt of signals in another direction. Therefore, it is respectfully asserted that the combination of Wildey with the AAPA is improper and it is respectfully requested that the rejection be withdrawn.

Notwithstanding that the combination of Wildey and the AAPA is improper, it is respectfully submitted that Wildey fails to cure the deficiencies of the AAPA with regard to recognizing a construction of uplink time slots and determining a new switching point based on the detected switching point and the recognized construction of uplink time slots and downlink time slots, as recited in independent claims 1, 11 and 21. It is, therefore, respectfully asserted that independent claims 1, 11 and 21 are allowable over the asserted combination of references.

#### Claim 4

It is respectfully noted that the Examiner, at paragraph 21 of the Office Action, asserts that paragraph 12 of the AAPA discloses adjusts a delay time of the signal. It is further respectfully noted that the Examiner, at paragraph 19 of the Office Action, indicates that the "[AAPA] fails to disclose the delay is variable."

It is respectfully submitted that the Examiner's assertion with regard to paragraph 12 of the AAPA contradicts the previous interpretation of the same reference. Therefore, it is further respectfully submitted the AAPA fails to disclose adjusts a delay time of the signal.

#### Claims 12 and 13

It is respectfully noted that the Examiner, at paragraph 23 of the Office Action, asserts that paragraphs 10-12 of the AAPA disclose that there is a "delay unit to delay the switching time" and the "modem 10 ... controls the switch 40 according to the

determined switching point." It is further respectfully noted that the disclosure at paragraphs 10-12 of the AAPA is directed to FIG 1, which is a "schematic block diagram showing the structure of a related art TDD terminal." See AAPA at paragraph 0037. Moreover, it is respectfully noted that FIG. 1 does not illustrate any variable delay unit, as recited in claims 12 and 13, in direct contrast to the "Variable Delay Unit 50" illustrated in FIG. 2, which is a "schematic block diagram of an apparatus for synchronizing uplink transmission and downlink reception of signals in accordance with one embodiment of the present invention." See AAPA at paragraph 0038.

It is respectfully submitted that the Examiner's interpretation of paragraphs 10-12 of the AAPA is not supported by the disclosure. Therefore, it is further respectfully submitted the AAPA fails to disclose a variable delay unit.

It is respectfully asserted that the combination of Wildey and the AAPA is improper and, therefore the rejection of claims 2-5, 12-15 and 25 should be withdrawn. It is further respectfully asserted that, notwithstanding the improper combination of Wildey and the AAPA, the Examiner has failed to establish the required *prima facie* case of obviousness with regard to claims 4, 12 and 13 and, therefore, those claims are allowable over the asserted combination of references. Moreover, it is respectfully asserted that claims 2-5, 12-15 and 25 are allowable in view of their dependence on an allowable independent claim.

Claim 27 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA view of Riley (U.S. Pat. No. 6,072,783). This rejection is respectfully traversed.

It is respectfully submitted that Riley fails to cure the deficiencies of the AAPA with regard to recognizing a construction of uplink time slots and determining a new switching point based on the detected switching point and the recognized construction of uplink time slots and downlink time slots, as recited in independent claim 21. It is, therefore, respectfully asserted that independent claim 21 is allowable over the asserted combination of references. It is further respectfully asserted that claim 27, which depends from claim 21, also is allowable over the asserted combination of references.

### CONCLUSION

In view of the above remarks, Applicant submits that claims 1-27 of the present application are in condition for allowance. Reexamination and reconsideration of the application, as originally filed, are requested.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

LEE, HONG, DEGERMAN, KANG & SCHMADEKA

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By: 

Richard C. Salfelder  
Registration No. 51,127  
Attorney for Applicant(s)

Customer No. 035884